

THE
NEW YORK STATE SCHOOL
OF
CLAY WORKING AND CERAMICS
AT

ALFRED UNIVERSITY
ALFRED, N. Y.

1929--1930

ALFRED UNIVERSITY PUBLICATION

New York State School of Clay Working and Ceramics

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COLLEGE CALENDAR

First Semester 1929-1930

Entrance examinations	Monday	1929 Sept. 16
" Freshman Week "	Tues. and Wed.	Sept. 17-18
Registration for Seniors, Juniors, and Sophomores	Thurs. and Fri.	Sept. 19-20
Instruction begins	Monday	Sept. 23
Mid-semester grades	Thursday	Nov. 21
Thanksgiving Recess begins	Wednesday evening	Nov. 27
THANKSGIVING RECESS		
Instruction resumed	Monday morning	Dec. 2
Founders' Day	Thursday	Dec. 5
Christmas Recess begins	Thursday evening	Dec. 19
CHRISTMAS RECESS		

Instruction resumed	Tuesday morning	1930 Jan. 7
Mid-year examinations begin	Friday	Jan. 24
Examinations end; semester ends	Friday evening	Jan. 31

Second Semester

Instruction begins	Wednesday morning	Feb. 5
Mid-semester grades	Thursday	Apr. 10
Easter Recess begins	Thursday evening	Apr. 17
EASTER RECESS		
Instruction resumed	Monday morning	Apr. 28
Final examinations begin	Friday	May 30
Memorial Day, half holiday	Friday	May 30
Senior examinations end	Tuesday	June 3
Under-class examinations end	Friday	June 6
Junior examinations end	Tuesday	June 10

NINETY-FOURTH COMMENCEMENT

Annual Sermon before Christian Associations	Saturday morning	June 7
Commencement Play	Saturday evening	June 7
Baccalaureate Sermon	Sunday evening	June 8
Alumni Association Directors' meeting	Monday afternoon	June 9
Annual Concert	Monday evening	June 9
Class breakfasts and reunions	Tuesday morning	June 10
Annual meeting of Trustees	Tuesday morning	June 10
Annual meeting of Corporation	Tuesday afternoon	June 10
Class-day Exercises	Tuesday afternoon	June 10
Alumni Banquet	Tuesday evening	June 10
Commencement Exercises	Wednesday morning	June 11
Alumni Association, Public Session	Wednesday afternoon	June 11
President's Reception	Wednesday evening	June 11

SUMMER VACATION

Summer Session, 1930

Term begins	Monday	July 7
Term ends	Friday	Aug. 15

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(Appointed annually by the Trustees of Alfred University)

BOOTHIE C. DAVIS, President

JOHN J. MERRILL

WILLIAM R. CLARKE

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First Semester 1930-1931

		1930
Entrance examinations	Monday	Sept. 15
" Freshman Week "	Tues. and Wed.	Sept. 16-17
Registration for Seniors, Juniors, and Sophomores	Thurs. and Fri.	Sept. 18-19
Instruction begins	Monday	Sept. 22
Mid-semester grades	Thursday	Nov. 20
Thanksgiving Recess begins	Wednesday evening	Nov. 26
THANKSGIVING RECESS		
Instruction resumed	Monday morning	Dec. 1
Founders' Day	Friday	Dec. 5
Christmas Recess begins	Thursday evening	Dec. 18
CHRISTMAS RECESS		
		1931
Instruction resumed	Tuesday morning	Jan. 6
Mid-year examinations begin	Friday	Jan. 23
Examinations end; semester ends	Friday evening	Jan. 30

Second Semester

Instruction begins	Wednesday morning	Feb. 4
Mid-semester grades	Thursday	Mar. 26
Easter Recess begins	Thursday evening	April 2
EASTER RECESS		
Instruction resumed	Monday morning	Apr. 13
Final examinations begin	Friday	May 29
Memorial Day	Saturday	May 30
Senior examinations end	Tuesday	June 2
Under-class examinations end	Friday	June 5
Junior examinations end	Tuesday	June 9

NINETY-FIFTH COMMENCEMENT

Annual Sermon before Christian Associations	Saturday morning	June 6
Annual Concert	Saturday evening	June 6
Baccalaureate Sermon	Sunday evening	June 7
Alumni Association Directors' meeting	Monday afternoon	June 8
Commencement Play	Monday evening	June 8
Class breakfasts and reunions	Tuesday morning	June 9
Annual meeting of Trustees	Tuesday morning	June 9
Annual meeting of Corporation	Tuesday afternoon	June 9
Class-day Exercises	Tuesday afternoon	June 9
Alumni Banquet	Tuesday evening	June 9
Commencement Exercises	Wednesday morning	June 10
Alumni Association, Public Session	Wednesday afternoon	June 10
President's Reception	Wednesday evening	June 10

SUMMER VACATION

Summer Session, 1931

Term begins	Monday	July 6
Term ends	Friday	Aug. 14

OFFICERS OF INSTRUCTION

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NEW YORK STATE SCHOOL OF CLAY- WORKING AND CERAMICS

In founding this school in the year 1900 and placing it under the control of Alfred University, the Legislature of the State of New York recognized not only the importance of education for the pursuit of industry and industrial art but also the fact that such education can best be pursued in co-operation with coordinated studies in the field of liberal arts.

The aims of education are vision and skill. Industry is making greater demands than ever upon the character and qualities of its employees, and the teaching profession calls for ability and personality of a superior order.

To enable its graduates to meet these requirements in their chosen careers, the School has been established. The studies relating to the arts and industries of ceramics are numerous and varied. Physics and Chemistry are fundamental and are closely followed by mechanical knowledge and manual dexterity. Engineering looks to production on a large scale, while Applied Art plans to beautify the product and enhance its appeal to the consumer.

There are two courses of instruction, each of which extends over four years and is equivalent to an accepted college course. In the course in Ceramic Engineering, instruction is given in the preparation and use of clays and other ceramic materials; in the use of machines, molds and dies for the shaping of various products and in the design and operation of all descriptions of kilns and furnaces. Lectures and laboratory exercises are arranged for the planning and preparation of ceramic materials including clay bodies, glazes, glasses, enamels and colors. Graduates are thus qualified to occupy positions as ceramic chemists, technical experts, or department managers.

The course in Applied Art is open to both men and women. Those taking this course are given instruction in drawing, painting, and design, thorough training in ceramic technique, practice, and theory, and in the allied crafts, including decorative textiles. Students showing special ability may elect additional courses in metal work and jewelry.

The purpose of this course is to meet the industrial need for those who can not only produce hand wrought ware but who can create and execute original work in accordance with the requirements of modern factory processes.

Graduates are entitled to a Special Provisional Certificate for the training of art in the Public Schools of the State of New York. A permanent Certificate may be granted upon the completion of a two credit course in life drawing within three years after graduation.

College Year

The college year consists of two semesters of about seventeen weeks each. There is a vacation at Christmas of about two weeks, a week's recess at Easter, and a summer vacation of about thirteen weeks.

Class Exercises

The class period, lecture or recitation, is one hour; the laboratory period is two hours. There are no classes Saturday or Sunday.

Unit of Credit

One class period per week for one semester is taken as the unit of credit and is called a semester hour. For graduation a credit of one hundred and forty-two semester hours is required.

System of Grading

The work of students in each subject is graded as A, excellent; B, good; C, fair; D, poor; E, conditioned failure; F, failure; I, incomplete; W, withdrawn.

Scholarship Indices

For determining scholarship and for awarding honors the office uses a system of point values corresponding to the above grades as follows: each hour at A is equivalent to 3 points; at B, to 2; at C, to 1; at D, to 0; at E, to -1; at F, to -2; at I, to -1, at W, to -1. At intervals the Registrar determines a scholarship index for every student and for student groups. These indices are obtained by dividing the total number of points by the total number of hours.

Absences

The maximum number of absences allowed per hour credit per semester is three (3). That is, in a two hour course, six (6) absences are allowed; in a three hour course, nine (9); in a five hour course, fifteen (15). Overenting will reduce the student's grade to F. Excess absences resulting from sickness or other justifiable causes may be excused by vote of the Committee on Absences. Two tardinesses count as one absence.

Examinations

Final examinations are held at the close of each semester, in addition to occasional written tests during the semester. Fees will be charged for all examinations taken by those not regular members of classes, or taken at other times than those appointed for the class examinations.

Registration

All students will register at the Registrar's office on the days given under "College Calendar"; new students entering at the beginning of the second semester will register on the first day thereof. Any student not registering on the days set therefor will be charged a fee of five dollars for late registration.

Each student is expected to register for at least sixteen hours, but may not register for more than seventeen with the

following exceptions; (1) physical training and assembly may be taken in addition to the maximum of seventeen hours; (2) if a student has had an average standing of B or higher in the preceding semester, he may register for more hours with approval of the office.

In order that a student may be entitled to the privilege of registration for the following semester,

Freshmen are required to have a minimum scholarship index of 0.

Sophomores are required to have a minimum scholarship index of 0.15.

Juniors are required to have a minimum scholarship index of 0.25.

Seniors are required to have a minimum scholarship index of 0.30.

Specials are required to have a minimum scholarship index of 0.25.

For graduation it is required that a student have a minimum scholarship index of 0.8 for his entire course.

Fees

Matriculation (all new students)	\$ 5 00
Graduation	10 00
Medical and Infirmary, per semester	5 00
Reading room, per semester	2 00
Athletics, per semester	10 00
College Paper (<i>Pilot Press</i>), Subscription \$1.25. Student	
Campus Tax, 75 cents per semester	2 00
EXTRA FEES, per semester, for the use of instruments,	
apparatus, and laboratory materials:	
Chemistry 1, 5, each	8 00
Chemistry 2, 3, 7, 10, each	10 00 or 15 00
Chemistry 4	15 00
Drafting	2 00
Gymnasium (freshmen, sophomores)	2 00
Physics 1b, 4, each	5 00
Surveying	5 00

Industrial Mechanics, 9, 12, each	5 00
Industrial Mechanics, 6, 7, 8, each	8 00
MISCELLANEOUS FEES AND DEPOSITS:	
Chemistry breakage deposit, Chemistry 1, per year.....	10 00
Chemistry breakage deposit, Chemistry 2, 3, 4, 5, 7, 10,	
each, per year	15 00
Room deposit, at Burdick Hall, per year	10 00
Room deposit, at Ladies Hall, per year	10 00

Room Deposits must be paid in advance at time rooms are reserved. In case a student fails to occupy a room so reserved the deposit is forfeited. Upon surrender of the room in good condition at the close of the school year the deposit will be refunded to the student.

Special examinations (final and mid-semester), each....	5 00
Special tests, each	1 00
Late registration (All students not registering on registration days, and all students who are absent from all classes on the first day of a semester)	5 00

Semester bills for fees will be issued on or before the fifteenth of October and February, and must be paid at the office of the Treasurer before the first of the following month. Students who fail to comply with this regulation are reported to the Dean of the college, and are rendered liable to suspension.

Rooms and board, including fuel, can be obtained in private families for \$8.00 to \$10.00 per week. Board in clubs organized and managed by the students themselves varies from \$5.00 to \$6.00 per week according to the means and inclinations of the students.

Estimated Annual Expenses

Excluding cost of clothing and travel, one can go through a college year by close economy upon \$300, and, by exercising care, upon \$350. An allowance of \$400 is comfortable.

Board, \$5.00 to \$6.00 per week	\$175—\$200
Rooms	60— 110
Laundry	20— 30
Books	25— 35
Class dues, etc.	10— 25
Total for year	\$290—\$400

Self-help

Many of the graduates of the school have been persons of very limited means who worked their way through. While the school cannot guarantee work to all applicants, enterprising students can usually find employment in the town with satisfactory compensation for all the time they can profitably spare from their studies. Some earn enough to meet the greater part of their expenses. Students should distinctly understand that when they attempt entire self-support they will find it necessary to lengthen their term of study.

ADMISSION

A candidate for admission to the freshman class must be (1) at least sixteen years of age, (2) of good moral character, and (3) a graduate of an approved four-year high school. The particular requirements for entrance to college explained below cover in each case not less than a four-year preparatory or high-school course.

Preparatory work is estimated in "units". The "unit" represents a course of five recitations weekly throughout an academic year of the preparatory school. Fifteen "units" or an equivalent and graduation from the school are definite requirements for unconditioned entrance.

Entrance Requirements

ENGLISH—3 units. The candidate must be familiar with elementary rhetoric, both as a science and an art, and must be proficient in spelling, punctuation, idiom, and division into paragraphs. Preparation must include the work in English prescribed by the various college associations.

Each student must be able to pass an examination upon the books selected from the list prescribed by the college entrance associations. The following ten are recommended: Shakespeare, *Julius Caesar* and *The Merchant of Venice*; Addison, *The Sir Roger de Coverley Papers*; Goldsmith, *The Deserted Village*; Scott, *Ivanhoe*; Hawthorne, *The House of the Seven Gables*; Irving, *Sketch Book*; Ruskin, *Sesame and Lilies*; Lowell, *The Vision of Sir Launfal*; Longfellow, *Courtship of Miles Standish*.

In addition to the above a thorough study of each of the works named below is required. The examination will be upon subject matter, form, and structure.

Shakespeare, *Macbeth*; Milton, *L'Allegro*, *Il Penseroso*, and *Comus*, or Tennyson, *Idylls of the King*; Burke, *Speech on Conciliation with America*, or Washington, *Farewell Address*, and Webster, *Bunker Hill Oration*; Macaulay, *Life of Johnson*, or Carlyle, *Essay on Burns*.

FOREIGN LANGUAGES—4 units. Latin grammar and composition; Caesar, four books of the *Gallic War*; Cicero, six orations; Virgil, six books of the *Aeneid* or equivalents; or four units from not more than three of the following: Latin, Greek, German, French, Spanish.

MATHEMATICS—2 units. Elementary algebra, including fundamental operations, factoring, fractions, ratio, proportion, radicals, quadratics; plane geometry, including the straight line, angle, circle, proportion, similarity, and areas.

SCIENCE—1 unit. Biology, botany, physiology, zoology, physical geography, physics, or chemistry. Any one subject may be offered.

ELECTIVE—5 units in addition to the above subjects. Candidates may substitute two units of science or one unit of science and one unit of advanced mathematics for two units of foreign language.

Summary

English	3 units
Mathematics	2 units
Foreign languages	4 units
Science	1 unit
Elective	5 units

Admission is gained, either on certificate or on examination, as follows:

Admission on Certificate

COLLEGE BOARD EXAMINATIONS. A statement from the College Board certifying that a student has satisfactorily passed the College Board examination in any subject will be accepted as credit in full for that subject.

REGENTS CREDENTIALS. The credentials of the University of the State of New York are accepted instead of an examination in the subjects required for admission, so far as such credentials cover these requirements. (For description of subjects, see *Entrance Requirements*).

PRINCIPALS' CERTIFICATES. Certificates are also accepted from principals of preparatory or high schools, provided such schools are known to the faculty for thoroughness of instruction. The certificate must show that the applicant is a graduate of a four-year high school. The certificate must also specify, in connection with each subject, the year in which it has been given, the extent to which it has been pursued, the amount of time given to it, and the degree of the applicant's proficiency, and must clearly show that the student has met the requirements in every way. Principals of high schools who desire to have their students admitted on certificate are invited to correspond with the Registrar, who will provide them with blank standard certificates of recommendation.

Admission on Examination

Candidates who fail to present satisfactory certificates must pass a written examination in the required subjects.

For the convenience of students not having such certificates, entrance examinations are held at Alfred on the first day of registration (Monday, September 15, 1930).

Conditioned Students

No student may enter the freshman class conditioned in any subject.

Admission to Advanced Standing

Students from other colleges having a course equivalent to that of Alfred may enter at the point from which they take dismissal, upon presentation of satisfactory certificates of standing and character. Such students should request the Registrar or corresponding official of the institution

from which they wish to be transferred to forward to the Registrar of Alfred University the following information:

1. A statement of their entrance units, including the date of their graduation from high school.
2. A transcript of their college credits.
3. A letter of honorable dismissal signed by the proper official.
4. A statement to the effect that they are eligible to return to the institution which they are leaving.

Industrial Experience

Each candidate for a degree in Ceramic Engineering is required to spend two summer periods of ten weeks each, or the equivalent, in an approved industrial plant and to turn in a satisfactory report, together with a certifying letter from the person in charge of the work. For each summer period one hour credit will be given.

With the approval of the director, which should be obtained not later than the close of the Sophomore year, a candidate for a degree may offer a thesis in some branch of ceramic research. The title of the thesis must be chosen before November 1st of the Senior year and a typewritten copy of the completed work must be deposited with the director not later than May 1st next following.

Graduation

Upon students who satisfactorily complete the course in Ceramic Engineering, Alfred University will confer the degree of Bachelor of Science (in Ceramic Engineering), and upon students who satisfactorily complete the course in Applied Art the degree of Bachelor of Science (in Applied Art).

COURSES OF STUDY

Course in Ceramic Engineering

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Mathematics 1	5	Mathematics 1	5
Chemistry 1	4	Chemistry 1	4
English 1	3	English 1	3
Ceramics 1	1	Ceramics 1	1
Drafting	3	Drafting	3
Physical Training	1	Physical Training	1
<hr/>		<hr/>	
17		17	

Second Year

<i>First Semester</i>		<i>Second Semester</i>	
Mathematics 3a	3	Mathematics 3b	3
Physics 1	5	Physics 1	5
Chemistry 2	4	Chemistry 3	4
Ceramics 2	3	Ceramics 2	3
Economics	2	Economics	2
Physical Training	1	Physical Training	1
<hr/>		<hr/>	
18		18	

Third Year

<i>First Semester</i>		<i>Second Semester</i>	
Mechanics	3	Mechanics	3
Chemistry 6	3	Chemistry 6	3
Ceramic Engineering 1	3	Ceramic Engineering 1	3
Geology	3	Mineralogy	3
Chemistry 4	3	Chemistry 5	3
Elective	3	Elective	3
<hr/>		<hr/>	
18		18	

Fourth Year

<i>First Semester</i>		<i>Second Semester</i>	
Ceramic Engineering 2	4	Ceramic Engineering 3	4
Physics 2	3	Power and Machinery	2
Power and Machinery	2	Professional English	2
Ceramic Calculations	2	Summer Practice	1
Summer Practice	1	Elective	9
Elective	6	<hr/>	
<hr/>		18	

The elective is to be chosen, with the consent of the Director, from the following subjects: Assembly, four hours; Chemistry 7, six hours; Chemistry 9, four hours; German or French, twelve hours; Economics, twelve hours; Music, six hours; Surveying, four hours; Thesis, four hours; Woodshop, four hours; Architectural Drafting, three hours; Topographical Drawing, three hours. Elements of Optical Mineralogy, four hours, (students having satisfactory index).

Courses in Applied Art

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Pottery 1	1	Pottery 1	1
Ceramics 1, Lecture and Laboratory	1	Ceramics 1, Lecture and Laboratory	1
Drawing 1a, Perspective	4	Drawing 1a, Perspective	4
Drawing 1h, Lettering	1	Drawing 1h, Lettering	1
Mechanical Drawing	2	Mechanical Drawing	2
Design 1	2	Design 1	2
English 1	3	English 1	3
Modern Language	3	Modern Language	3
Physical Training	1	Physical Training	1
<hr/>	18	<hr/>	18

Second Year

<i>First Semester</i>		<i>Second Semester</i>	
Pottery 2	2	Pottery 2	2
Ceramics 2, Lecture and Laboratory	3	Ceramics 2, Lecture and Laboratory	3
Drawing 2, Charcoal	2	Drawing 2, Charcoal	2
Design 2	2	Design 2	2
English 2	3	English 2	3
Modern Language	3	Modern Language	3
Elementary Psychology	2	Elementary Psychology	2
Physical Training	1	Physical Training	1
<hr/>	18	<hr/>	18

Third Year

<i>First Semester</i>		<i>Second Semester</i>	
Pottery 3	2	Pottery 3	2
Ceramics 3, Laboratory	2	Ceramics 3, Laboratory	2
Studio Management 1	2	Studio Management 1	2
Drawing 3, Watercolor	2	Drawing 3, Watercolor	2
Design 3	2	Design 3	2
Educational Psychology	3	Principles of Education	3
History of Western Europe	3	History of Western Europe	3
History of Education	2	History of Education	2
<hr/>	18	<hr/>	18

Fourth Year

<i>First Semester</i>		<i>Second Semester</i>	
Pottery 4	4	Pottery 4	4
Ceramics 4	2	Ceramics 4	2
Studio Management	2	Studio Management	2
Special Methods in Drawing and Practice Teaching	2	Special Methods in Drawing and Practice Teaching	4
Design 4	2	Design 4	2
History of Art	2	History of Art	2
General Methods of Education	3	General Methods of Education	1
<hr/>	17	<hr/>	17

DEPARTMENTS OF INSTRUCTION

Description of Courses

CERAMIC TECHNOLOGY

Professor Binns

Professor Merritt

1. Lectures on the origin, properties, and uses of clays and other ceramic materials. Types of ware and methods of manufacture. Elementary glaze and body composition. History of Ceramics.

Laboratory practice in the operations involved in manufacture. The preparation and use of forms, molds, and dies. Making saggers, jiggering, pressing, and casting pottery. Making brick and tile. The general use of the machine equipment.

First year. One hour lecture and two hours laboratory. *One hour.*

2. Lectures on the occurrence, classification, and identification of clays. The manufacture of all classes of ceramic products. The theory and practice of drying and burning. The compounding of clay mixtures, and the production and use of glazes and colors. The glaze formula.

Laboratory practice in clay testing. The measurement of the physical properties of clays and the compounding of bodies and glazes. Kiln firing.

Second year. Two hours lecture and four hours laboratory. *Three hours.*

3. Laboratory practice for art students. The production of form by molding. The preparation of glazes for decorative pottery. Technical problems.

Third year. Four hours laboratory. *Two hours.*

4. Thesis in applied art.

Fourth year. Four hours laboratory. *Two hours.*

PROFESSIONAL ENGLISH

Professor Amberg

A course in the use of English in the Engineering profession. Technical descriptions and the writing of reports.

Fourth year. Two hours lecture and recitation. *Two hours. II.*

CERAMIC ENGINEERING

Professor Amberg

1. Lectures are given on the chemical, physical, and mineralogical changes which take place in clays, bodies, and glazes during their preparation, drying and burning. Details of different types of plants, such as brick, pottery, refractory, etc., are discussed.

Laboratory practice includes the testing of clays and other ceramic materials and the production of bodies, glazes, and completed wares.

Third year. Two hours lecture and four hours laboratory. *Three hours.*

2. The theory and practice of methods employed in enameling cast iron and steel. Laboratory exercises in production.

The making, calibration and use of various instruments; pyrometers, gauges and testing apparatus.

Fourth year. Two hours lecture and recitation and four hours laboratory. *Four hours. I.*

3. The application of general engineering principles to the ceramic industry. The topics studied include refractories, glass, lime, plasters and cements; drying, heat reactions and kiln construction.

The laboratory work consists of methods of testing and, so far as possible, methods of production.

Fourth year. Two hours lecture and recitation and four hours laboratory. *Four hours. II.*

GEOLOGY. A course in general geology especially arranged

for the ceramic engineer. It deals with the development and the features of the earth's surface, with special reference to the geology of ceramic materials.

Third year. Three hours lecture and recitation. *Three hours. I.*

MINERALOGY. This course includes an introduction to crystallography, microscopic mineralogy and the identification of minerals and rocks by inspection and simple tests.

Third year. Two hours lecture and one hour laboratory. *Three hours. II.*

CERAMIC CALCULATIONS

Professor Amberg

Solution of chemical and physical problems involved in compounding ceramic mixtures including wet blending, and slip corrections. The solving of every day factory problems occurring in the manufacture of clay wares. Lecture and recitations.

Prerequisite, Mathematics 6 or equivalent. Fourth year. *Two hours. I.*

POWER AND MACHINERY

The aim of this course is to familiarize the student with the installation, maintenance and repair of shop power and machinery. With this end in view, a study will be made of internal combustion engines, ceramic machinery and methods of power transmission. Under repair will come bearing removal, shaft straightening, belt lacing, valve grinding and such other operations as are necessary to the proper maintenance of a shop. Laboratory exercises will be carried on in which each student will be required to perform the different operations. During the last half of the second semester a study of the Strength of Materials will be taken up. This will include elastic and ultimate strength, general properties, moments for beams and columns, torsion of shafts, elastic deformities, reinforced concrete, combined stresses, and resilience. *Two hours.*

CHEMISTRY

Professor Rice

Professor Cortelyou

1. **INORGANIC CHEMISTRY.** The fundamental principles of chemistry are taught by a systematic study of the non-metallic elements during the first semester, followed by a broadening of the student's knowledge by study of the metallic elements during the second half of the year. The laboratory work, in which the student is expected to demonstrate facts and principles for himself, follows closely upon class room discussion. Lectures and recitations, three periods; laboratory, two periods. Textbook, Deming, *General Chemistry. Four hours.*

2. **QUALITATIVE ANALYSIS.** The purpose of this course is not, primarily, to teach the student to make analyses: it is intended, in the classroom, to give a further and more thorough training in the fundamentals of chemistry and in the laboratory to acquire a better technique in the handling of apparatus and materials and to learn the chemistry of the metals. The writing of equations and the solution of problems is emphasized. Simple salts and mixtures are issued for analysis. Prerequisite, Chemistry I. *Four hours. I.*

3. **QUANTITATIVE ANALYSIS.** This course is devoted to volumetric and elementary gravimetric analysis. In the laboratory emphasis is placed upon integrity, accuracy and the development of a good analytical technique. In the classroom the principles of stoichiometry, law of mass action, solubility product, etc., are covered. Numerous problems are assigned. Lectures and recitations, one period; laboratory, three periods. Text book, Popoff, *Quantitative Analysis.* Prerequisite Chemistry 2. *Four hours. II.*

4. **QUANTITATIVE ANALYSIS.** This is an advanced course, covering the analysis of silicate rocks, clays, etc. Lectures and recitations, one period; laboratory two periods. Textbooks, Fales, *Inorganic Quantitative Analysis*; Hillebrand, *The*

Analysis of Silicate and Carbonate Rocks. Prerequisite, Chemistry 3. *Three hours. I.*

5. **FUELS AND COMBUSTION.** The analysis of solid, liquid and gaseous fuels and their products of combustion is discussed in the class room and carried out in the laboratory. Industrial Stoichiometry, covering combustion calculations on furnaces and kilns, heat losses, etc., is included in the course. Lectures and recitations, two periods; laboratory, one period. Textbooks, Parr, Fuel, Gas, Water and Lubricants; Lewis and Radasch, Industrial Stoichiometry. Prerequisite, Chemistry 3. *Three hours. II.*

6. **PHYSICAL CHEMISTRY.** The characteristics of chemical substances which determine their properties and reactions, such as the pressure-volume relations of gases, the properties of solutions, the equilibria and rate of chemical changes, heterogeneous equilibrium in terms of the phase rule, thermo-chemistry and colloidal chemistry are considered in this course. The student is required to solve a large number of problems pertaining to the subjects discussed. Prerequisite, Chemistry 3, Mathematics 3a and 3b and Physics 1a and 1b. *Three hours.*

APPLIED ART

Professor Fosdick

Professor Nelson

Professor Harder

Miss Hewitt

Although pottery is the craft in which the school offers exceptional facilities, additional courses in the crafts of metal work and decorative textiles are offered with the view of giving the student discrimination in the selection and use of materials.

To obtain the Teachers' Provisional Certificate for Drawing and Design in New York State, the necessary subjects in Education are taken in the third and fourth years with psychology as a prerequisite. To obtain the Permanent Certificate it is necessary to take a two credit summer course in Life Drawing.

Pottery

Pottery 1, 2, 3, 4, cover the methods of the production of pottery and include the following; building by hand, throwing on the potter's wheel, the construction of molds, and casting and pressing from molds. Intensive design for these methods stresses the individuality of each and emphasizes creative form rather than surface decoration.

The structure of glazes in a wide range of textures and colors is closely studied as well as decorative processes for clay surfaces and glaze treatments such as slip painting, sgraffito, and glaze inlays.

The study of kilns of various types with which the school is well equipped includes their placing and firing. It is felt that to the potter extensive experience with kilns is indispensable. Whenever possible students build for themselves the type of kiln in which the fire is applied by a torch.

Drawing

DRAWING 1. Freehand perspective. A thorough course in the fundamentals of freehand drawing, including principles of

perspective, pencil technique, still life drawing in accented line and in light and shade, elementary composition, and outdoor sketching.

DRAWING 1a. Lettering and commercial art.

DRAWING 2. Still life drawing in charcoal, pen and ink technique, and advanced composition.

DRAWING 3. Free and decorative treatment of water color technique in the studio and out of doors.

DRAWING 4. Special methods and practice teaching. Prerequisites: drawing and design 1, 2, 3, elementary psychology, mechanical drawing, educational psychology, principles of education. A course in the teaching and supervising of art in public schools. Practice teaching in local schools, one hour each week. Term paper.

Design

DESIGN 1. Study of the elements of structural design in relation to the nature and purpose of materials used in the crafts, such as wood, metal, woven fabrics, clay and glass. Lectures and required reading from historical sources and current magazines. Nature study for appreciation of structural line and form. Emphasis in the first year is placed on the possibility and limitations of materials used in the decorative crafts rather than on pattern as such.

DESIGN 2. Development of related pattern for the decorative crafts. Color study including theory of color.

DESIGN 3. Dyeing, block printing, weaving, stitchery. Designing and execution in several of the above mentioned techniques, table-cloths appropriate for formal and informal use collaborating with ceramic design.

DESIGN 4. Thesis in Design—emphasizing in detail one of the decorative crafts.

History of Art

A survey of the fine arts and crafts through the ages. Text book, *Art Through the Ages*, Helen Gardner.

DEPARTMENT OF INVESTIGATION AND RESEARCH

Clay Testing

Professor Binns

Professor Merritt

The State School of Ceramics is fitted, and the experts in charge are qualified, for the professional examination and testing of clays for economic purposes. Such clays may be classified under the following heads:

(a) Kaolin, white burning residual clay.

(b) Kaolin, white burning, washed for market, used in the manufacture of pottery, porcelain, and paper.

(c) Ball clay, white or cream burning, sedimentary clay of high plasticity, used in pottery manufacture.

(d) Stone ware clay, gray or cream burning, more or less sandy in character, used in stoneware manufacture.

(e) Fire clay, buff or white burning, refractory, used for manufacture of fire brick.

(f) Brick clay including colored clays and shales, used for the manufacture of brick and tile of various qualities and descriptions.

For each of the above classes special tests are necessary and the charges made are proportionate to the work required.

A report upon each sample will be furnished and must be understood to refer only to the samples submitted unless the experts are instructed to examine the deposit and prepare their own samples, in which case special charges will be made. The report includes physical tests and chemical analysis where necessary.

Advice as to washing or other preparation of the clay is also given, together with an opinion as to the industry to which the material may be applied.

Industrial Problems

Professor Binns

Professor Amberg

Professor Merritt

The problems incidental to the manufacture of clay wares are regularly investigated at the school. Manufacturers are invited to present questions for study. Persons resident within the State are entitled to reasonable services without charge.

REGISTRATION OF STUDENTS 1929-1930

SENIORS

NAME	RESIDENCE	COURSE
Armstrong, Leland Reuben	Alfred	Eng.
Bassett, Robert Bliss	Alfred	Eng.
Burdick, Milton DeWitte	Alfred	Eng.
Fabianic, William Lewis	Cochran, Pa.	Eng.
*Gardner, Paul Vickers	Canistota	Art
Gilder, Charles Louis	Danville	Eng.
Greene, Fern Ramona	Alfred	Art
Greene, Frances	Balboa Hts., Canal Zone	Art
Hatlock, Dorothy Emma	Oneida	Art
† Henshaw, Doris May	Alfred	Art
Karthauser, Harold Edwin	Greenwich, Conn.	Eng.
Lynn, Don Carlisle	Smithton, Pa.	Eng.
McGraw, Jack Edgar	Arkport	Eng.
Marley, Ruth Irene	Hornell	Art
Mays, James Carter	Canistota	Eng.
Mills, Harriette Janet	Akron	Art
Nielson, John, Jr.	Port Chester	Eng.
† Ostrander, George William	Almond	Eng.
Post, Helen Margaret	Bloomfield, N. J.	Art
Rogers, Frances Randolph	Daytona Beach, Fla.	Art
Smith, Robert Karl	Addison	Eng.
Spencer, Ernest Henry	Friendship	Eng.
Thomson, John Weston	Buffalo	Eng.
‡ Thorngate, Bruce Whitfield	Salemville, Pa.	Art
Titworth, Alfred Alberti	Alfred	Art
Wamsley, Delos Herschel	Alfred Station	Eng.
Weishan, Theora Mae	Ellicottville	Art
Zschiegner, Emil George	Weillsville	Art

JUNIORS

Allen, Mary Brown	Stamford, Conn.	Art
Beckerman, Luke Frederick	Chicago, Ill.	Art
Beeton, Earl Everett	E. Rochester	Eng.
Brown, Albert Stokes	Kenmore	Eng.
Bryant, Eugene Edward	Macedon	Eng.
Cauger, Edward Hassel	Lackawanna	Eng.
Chamberlain, Katherine LaRouette	Angelica	Art
Clarke, William Lewis	Niagara Falls	Eng.
Ellison, Henry William	Waverly	Eng.
Gallup, John Lyman	Cannan	Eng.
Gillman, George Thomas	Hornell	Eng.
Green, Wilber Fisk	Horseheads	Eng.
Hill, George Wesley	Pittsford	Eng.
Hillmiller, John Karl	Salamanca	Eng.
Jaquiss, Gerard Johnston	Floral Park	Eng.

† Work completed in Summer School.

* Work being completed by correspondence.

‡ Work being completed in another institution.

NAME	RESIDENCE	COURSE
Keller, Roscoe Watson	Kenmore	Eng.
Kleni, Myrtle Anne	Hamilton	Art
Lieber, Roberta Naomi	West Nyack	Art
Lyon, Margaret Covert	Elmira	Art
Manieri, Theresa Marie Antoniette	Salamanca	Art
Maroney, Paul Anthony	Salamanca	Art
Martin, Paulina Mercia	Jamestown	Art
Messimer, LaVerne Allen	Manebester	Eng.
Perry, Ada Eudora	Jordan	Art
Phelps, Marjorie Frances	Granville	Art
Sackett, Harry Nelson	Bolivar	Eng.
Shremp, Raymond Maxwell	Rochester, Pa.	Eng.
Smigrod, Frieda Edythe	Cedarhurst Park	Art
Stortz, Avis	Warsaw	Art
Swarthout, Betty Mary	Hornell	Art
Travis, Thurlow Talbot	Hornell	Eng.
Wallm, Virginia Deems	Hornell	Art

SOPHOMORES

Acker, Lois French	Bridgeton	Art
Annis, Norman Lewis	Angola	Eng.
Austin, Francis Ernest	Machias	Eng.
Bailey, Theodore Dockstader	Ravena	Eng.
Barton, Meredith	Emporium, Pa.	Eng.
Blawat, Michael Frank	Alfred	Eng.
Bliss, Sarah Reed	Hornell	Art
Blomquist, Frank Ernest	Ebenezer	Eng.
Burrows, Marion Alene	Friendship	Art
Callahan, Lawrence Walter	Hornell	Eng.
Cartwright, Elisabeth Emma	Delevan	Art
Davison, William Lynn	Silver Creek	Eng.
DeLaney, Sidney Reed	Williamsport, Pa.	Eng.
Dixon, Margaret Mary	Hamilton	Art
Flint, Robert Leon	Hornell	Eng.
Fuller, William Cooper	Palatine Bridge	Eng.
Gagliano, Francis William	Valley Stream	Eng.
Gaulrapp, Richard Alfred	Queens Village	Eng.
Harwood, Lynn See	Lockport	Eng.
Heard, Marian Gladys	West New Brighton	Art
Hopper, Lawrence Steinbauer	Buffalo	Eng.
Huffcutt, Harold Winters	Cleveland, Ohio	Eng.
Kinzie, Glenn While	Elmira	Art
Leonhard, Floyd Carl	Buffalo	Eng.
Lockwood, Dale Mervin	Portland Mills, Pa.	Eng.
McConnell, John Milton	Rochester	Eng.
McCourt, Francis Higgins	Hempstead	Eng.
McLean, Wilma Christine	Hempstead	Art
Martin, Pauline	Alfred	Art
Mattice, Doris Elizabeth	Eaton	Art
Mitchell, Ruth Lois	Hornell	Art
Monks, George Fred	Valley Stream	Eng.
Mott, Hazel Evelyn	Mt. Kisco	Art
Nobbs, Robert Charles	Eden	Eng.

NAME	RESIDENCE	COURSE
Rogers, Elizabeth Louise	Daytona Beach, Fla.	Art
Schlehr, Walter Raymond	Cleveland, Ohio	Eng.
Sixbey, Carlton Buck, Jr.	Mayville	Eng.
Smith, Bernadine Frances	Alfred	Art
Sonne, Thomas Raymond	Dansville	Eng.
Spitt, Howard Arthur	Rochester	Eng.
Stanton, Dorothy Ethel	Cohocton	Art
VanSicklen, August Kenneth	Islip	Eng.
Whitfield, Anne Morehead	Richmond, Va.	Art

FRESHMEN

Armour, Hector Campbell	Alfred Station	Eng.
Armstrong, Elnora Maxine	Alfred	Art
Bankoske, Leocadia	Dunkirk	Art
Barton, Howard Devern	Salamanca	Eng.
Berls, Robert Edwin	Queens Village	Eng.
Breeman, Leonard, Jr.	Alfred	Eng.
Buckley, George, Jr.	Jerome, Idaho	Eng.
Cass, Thaddeus Gilford	Richburg	Eng.
Chamberlain, Richard Lee	Cuba	Eng.
Chons, Michael	Spring Valley	Eng.
Claire, Irene Louise	Alfred	Art
Crandall, Eugene Rogers	Alfred	Eng.
Dickens, Donald Applebee	Elmira Heights	Eng.
Duffy, Francis Anthony	Nelvidere	Eng.
Egger, Paul Edward	Hornell	Eng.
Elliott, Kenneth Douglas	Salamanca	Eng.
Gaiser, Arthur	Elmira	Eng.
Garrison, Helen Elizabeth	Daytona Beach, Fla.	Art
Goetichius, Donald Ralph	Queens Village	Eng.
Hallenbeck, Donald Clarence	Ravena	Eng.
Hallett, Crawford William	Canisteo	Eng.
Halloek, Kitteridge Jennings	Islip	Art
Hammann, Karl Mutchlor, Jr.	Jamaica	Eng.
Hatchman, Genevieve	Pittsburgh, Pa.	Art
Hayden, Claude Llewellyn	Wantagh	Eng.
Henderson, Frank Downer	Bolivar	Eng.
Hewey, Charles James	Queens Village	Eng.
Holden, John Crawford	Cuba	Eng.
Huebner, Richard Harris	Wheeling, W. Va.	Art
Hulbert, Howard Everett	McGraw	Eng.
Jenks, Olive Chamberlin	Newtonville, Mass.	Art
Kemery, Donald Edward	Williamsport, Pa.	Eng.
Kopko, Frank	Elmira	Eng.
Lathrop, Kathryn Josephine	Angelica	Art
Lewis, Richard Orville	Attica	Eng.
Marloy, Doris Elaine	Hornell	Art
Merck, Walter John	Queens Village	Eng.
Misel, Carl Henry, Jr.	Naples	Eng.
Mooney, George William	Hamilton	Art
Muller, Frederick Wentworth	Bellerose, L. I.	Eng.
Murray, James Francis	Kew Gardens	Eng.

NAME	RESIDENCE	COURSE
Newton, Devaulson Dan	Homer	Eng.
Orcutt, Robert Newton	Poughkeepsie	Eng.
Ostrander, Van Rensselaer	Olean	Eng.
Parmalee, Vivian Hope	Oneida	Art
Perry, Regal Orson	Whitesville	Eng.
Pieters, Johanna Cornelia	Alfred	Art
Razey, Robert Martin	Hornell	Eng.
Reasor, Gladys Marie	Big Flats	Art
Reynolds, Owen Joseph	Addison	Eng.
Robinson, Ruby Donna	Andover	Art
Roe, Leon Margeson	Hornell	Eng.
Rogers, Charles Zacharie	Marlboro	Eng.
Rowley, Robert Warner	Silver Creek	Eng.
Schiffner, Louis James	Little Valley	Eng.
Shappe, Harold LeRoy	Elmira	Eng.
Sinclair, Alexander William	Salamanca	Eng.
Smith, Wilma Myrtle	Cuba	Art
Steenrod, Harold Francis	Belmont	Eng.
Taylor, Virginia Maxson	Alfred	Art
Towner, Joseph Benjamin	Hornell	Eng.
Vezzoli, Dante	Winfield, N. Y. C.	Eng.

SPECIAL

Colegrove, Marcia Elizabeth	Hornell	Art
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Total

	Art.	Engineering	Total
Seniors	13	15	28
Juniors	15	17	32
Sophomores	16	27	43
Freshmen	17	45	62
Specials	1		1
	<hr/> 62	<hr/> 104	<hr/> 166

